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GEOLOGICAL SURVEY

Water Resources Division
Federal Building, Room 428
301 South Park Avenue, Drawer 10076
Helena, Montana 59626-0076

April 4, 1988

Stephanie Wallace
EPA, Region VIII
301 S. Park Avenue
Helena, Montana 59626

Dear Stephanie:

I have read the draft "Initial Groundwater Computer Model Runs, Burlington Northern Site, Somers, Montana" by ReTec. The analytical approach used in the analysis provided some useful insight in movement of naphthalene through the subsurface in the vicinity of the CERCLA lagoon. However, it is important to note that no field data are available to verify the results.

Some comments I have include:

1. page 10. The draft report states that 1927 is the assumed date of initial contamination. This assumption is stated to be "conservative", in fact if contamination first occurred at some later date, this assumption would be the most optimistic interpretation. If field data were available to validate the model, it would define the extent and concentration of a naphthalene plume at the present time. The assumption that naphthalene first entered the aquifer at the earliest date possible allows the maximum amount of time for the contaminate to migrate. The "conservative" approach would be to assume that the contamination began at the latest possible date.
2. page 14. The investigators may wish to run the model using higher and lower values for the retardation factor to demonstrate the model's sensitivity to this parameter.
3. page 18. Well 85-7 is not an appropriate well to use in calibrating the model. The well is perforated from about 65-70 feet. The model simulates movement of naphthalene in the shallow water table, not the deeper confined system.
4. page 19. Based on the model results, it may be advisable to install the second well much nearer to the lagoon. Wells installed beyond the anticipated front of the contaminant plume would provide little information that could be used to calibrate the model. Data suggests that creosote was present in the shallow system at the site of well 85-7. If the creosote came from the lagoon, a shallow well at that site might be interesting.

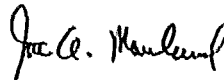
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5. page 20. Any evidence of contamination in the boreholes should prompt a laboratory analysis for naphthalene.
6. page 20. Water samples collected for laboratory analysis should not be filtered before analysis.
7. page 20. Will TOC tests show the presence of naphthalene?
8. page 21. As stated earlier, well 85-7 is not an appropriate well for use in model validation. A sample from the well would be useful in documenting the presence of contaminants in the deeper system, but would not provide data on the lateral extent of naphthalene in the upper system.

I hope these comment are useful to you. I will continue to review the draft report in preparation for the Friday meeting. I have another commitment on Thursday afternoon, but would be available that morning should you wish to meet.

Sincerely,



Joe A. Moreland
District Chief